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Dated: June 18, 2003

Signature:

(Elena M. Maglitta)

Docket No.: HO-P02233US0

(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Thomas C. Gipson

Reissue Application No.: 09/484,260
Reexamination Control No. 90/005,708

Group Art Unit: 3672

Examiner: Suchfield, George A.

#21F
EU
Jenniss
10/24/03

For: METHOD AND APPARATUS FOR
INJECTIONS COILED TUBING IN WELLS

RESPONSE TO OFFICE ACTION DATED 4/18/2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please amend the aforementioned application as follows:

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In the Claims:

4. (Twice Amended) [The apparatus of claim 1 wherein] An apparatus for injecting coiled tubing into a hole in the earth's surface comprising:

a frame having a first end and a second end;

a first and second spool support arm mounted to said frame,

a tubing storage spool removably mounted to said support arms, said tubing storage spool having said coiled tubing stored thereon;

an injector reel rotatably interconnected to said frame; and

a drive mechanism attached to said injector reel to rotate said injector reel;

wherein said spool support arms are vertically adjustable to accept varying tubing storage spool diameters

[said second tubing injecting position injecting position positions said injector reel above said front end of said frame, and said coiled tubing exits said apparatus at an angle less than 90° to said surface].

Please cancel claim 6 without prejudice.

Please cancel claim 7 without prejudice.

Please cancel claim 8 without prejudice.

Please add the following new claims 12-25:

12. (New) The apparatus of claim 4, wherein said spool support arms are horizontally adjustable to accept varying spool widths.

13. (New) The apparatus of claim 4, further comprising a hold down assembly mounted around a portion of the circumference of said injector reel for exerting a pressure against said coiled tubing.

14. (New) The apparatus of claim 13, wherein said pressure is exerted over more than 90° of said injector reel when said injector reel is in said second operative position and said coiled tubing is directed between said hold down assembly and said circumference of said injector reel to provide positive engagement of said tubing by said injector reel when said injector reel is rotated to pull said tubing off of said tubing storage spool or return said tubing to said tubing storage spool.

15. (New) The apparatus of claim 13, wherein said hold down assembly comprises:

multiple spindle brackets, said brackets having a spindle connected to said spindle bracket; a roller rotatably connected to said spindle, the roller having a groove; and a tension adjuster for adjusting the tension of the roller against said coiled tubing.

16. (New) The apparatus of claim 4, wherein said second position positions said injector reel above said first end of said frame, and said coiled tubing exits said apparatus at an angle less than 90° to said surface.

17. (New) The apparatus of claim 4, further comprising a mast pivotally mounted on said frame, wherein said injector reel is rotatably interconnected to the frame via the mast.

18. (New) The apparatus of claim 4, further comprising a mast pivotally mounted on said frame, wherein said frame is pivotally moveable in a vertical direction.

19. (New) The apparatus of claim 4, wherein said injector reel moveable from a first stored position to a second operative position.

20. (New) The apparatus of claim 4, wherein each support arm having a bullnose assembly for engagement with said storage spool.

21. (New) The apparatus of claim 4, wherein said injector reel is moveable from a first stored position to a second operative position.

22. (New) The apparatus of claim 4, further comprising a tubing straightener mechanism attached to said injector reel.

23. (New) The apparatus of claim 4, wherein the drive mechanism comprises:

a hydraulic motor; and
a spool drive socket interconnected to said hydraulic motor via a chain drive or belt.

24. (New) The apparatus of claim 23, wherein the drive mechanism further comprises an adjustable idler to vary the length of the drive mechanism to accommodate various diameter spools.

F2 25. (New) The method of claim 11, wherein the pressure against said tubing is performed by varying the pressure of one or more rollers of a hold down assembly against said coiled tubing.

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Status of claims and support for claim changes

Claim 1 was previously canceled.

Claim 2 was previously canceled.

Claim 3 was previously canceled.

Claim 4 is pending and has been amended. Support for the amendment may be found in Figs. 1-4 and Figs. 9-15. See also the specification page 2, line 18 – page 3, line 8. See also page 9 lines 1-6.

Claim 6 is presently canceled.

Claim 7 is presently canceled.

Claim 8 is presently canceled.

Claim 9 is pending and was previously amended.

Claim 11 is pending and was previously amended.

Claim 12 is newly added. Figures 4, 8, 10, and 13-15 support that the spool support arms are horizontally adjustable to accept varying spool widths. See also the specification at page 12 lines 1-2.

Claim 13 is newly added. Figures 1&5 and figures 7&9 supports a hold down assembly mounted around a portion of the circumference of the injector reel for exerting a pressure against the coiled tubing. Also see the specification on page 3, lines 17-24.

Claim 14 is newly added. The specification on page 3 lines 17-20 supports that pressure is exerted over more than 90° of the injector reel when the injector reel is in the second operative position and the coiled tubing is directed between the hold down assembly and the circumference of the injector reel to provide positive engagement of the tubing by the injector reel when the injector reel is rotated to pull the tubing off of the tubing storage spool or return the tubing to the tubing storage spool.

Claim 15 is newly added. The specification on page 12, lines 10-25 supports the hold down assembly having multiple spindle brackets, the brackets having a spindle connected to the spindle bracket; a roller rotatably connected to the spindle, the roller having a groove; and a tension adjuster for adjusting the tension of the roller against the coiled tubing.

Claim 16 is newly added. Figure 9 illustrates that the second position positions the injector reel above the first end of the frame, and the coiled tubing exits the apparatus at an angle less than 90° to the surface.

Claim 17 is newly added. Figures 1&5 illustrate a mast pivotally mounted on the frame, wherein the injector reel is rotatably interconnected to the frame via the mast.

Claim 18 is newly added. Figures 1&5 and figures 7&9 illustrate a mast pivotally mounted on the frame, wherein the frame is pivotally moveable in a vertical direction.

Claim 19 is newly added. Figures 1&5 and figures 7&9 illustrate that the injector reel is moveable from a first stored position to a second operative position.

Claim 20 is newly added. Figure 4 and figure 8 illustrate each support arm having a bullnose assembly for engagement with the storage spool.

Claim 21 is newly added. Figures 1&5 and figures 7&9 illustrate that the injector reel is moveable from a first stored position to a second operative position.

Claim 22 is newly added. Figure 1 and figure 7 illustrate a tubing straightener mechanism attached to the injector reel.

Claim 23 is newly added. Figure 1 and figure 7 illustrate the drive mechanism having a hydraulic motor and a spool drive socket interconnected to the hydraulic motor via a chain drive or belt.

Claim 24 is newly added. Figure 1 and figure 7 illustrates the drive mechanism having comprises an adjustable idler to vary the length of the drive mechanism to accommodate various diameter spools.

Claim 25 is newly added. Figure 1 and figure 7 illustrates the pressure against the tubing is performed by varying the pressure of one or more rollers of a hold down assembly against the coiled tubing.

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REMARKS/ARGUMENTS

Claims 4-9 and 11 are pending in the application. Claim 11 is in condition for allowance.

Claims 4-9 are rejected under 35 U.S.C 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 4-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by the Vita Brochure.

Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph.

Claims 6, 7 and 8 are canceled without prejudice. Claims 12-25 are newly added.

Among other elements, claim 4 is amended such that the claim requires that the "spool support arms are vertically adjustable to accept varying tubing storage spool diameters." The element that "said second tubing injecting position injecting position positions said injector reel above said front end of said frame, and said coiled tubing exits said apparatus at an angle less than 90° to said surface" has been deleted. As presently drafted, claim 4 overcomes the rejection under 35 U.S.C 112, first paragraph as well as under 35 U.S.C. 102(b). All of the other claims depend either directly or indirectly from claim 4.

For these reasons it is submitted that this application is condition for allowance. If there are any question, call the undersigned at the telephone number indicated below.

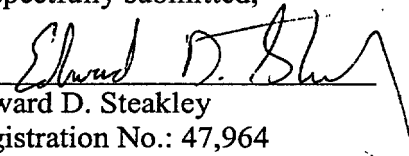
In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2375, under Order No. HO-P02233US0 from which the

undersigned is authorized to draw.

Dated: June 18, 2003

Respectfully submitted,

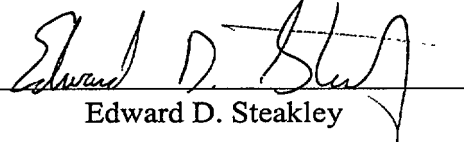
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CERTIFICATE OF SERVICE

I do hereby certify that a copy of the Response to Office Action, in a manner provided in 37 CFR 1.248, is being deposited with the United States Postal Service on June 18, 2003, addressed to:

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